

Prolonged Pregnancy - Dr. Rozhan

- **Prolonged pregnancy:** is a pregnancy of 294 days duration or more also defined as post mature or post-term.
- **Post-date pregnancy:** is a pregnancy of more than 280 days duration and less than 294 days.

Prolonged pregnancy

- Is associated with an increase in perinatal mortality and morbidity in pregnancies which appear to be otherwise low risk.

Epidemiology

- The incidence of prolonged pregnancy is **10%** but with accurate last menstrual period calculation and early ultrasound estimation before 20 weeks pregnancy the incidence decline to **4%**.

Etiology of Prolonged Pregnancy

1. Occurs in nullipara more than multipara.
 2. Male sex has more prolonged pregnancy.
 3. Congenital abnormality like Anencephaly.
 4. Placental sulphatase enzyme deficiency.
 5. Obese women with body mass index more than 30.
 6. Genetic factor plays a role also indicate a tendency for daughters of mothers who deliver post-term to have prolonged pregnancies.
 7. Low vaginal levels of fetal fibronectin at 39 weeks are predictive of increase post-term pregnancy.
 8. Transvaginal measurement of cervical length at 37 weeks predicts both prolonged pregnancy and failed induction.
 9. Prolonged pregnancy could result from variations in the corticotrophin releasing hormone (CRH) system during pregnancy.
 10. History of previous post term pregnancy increase risk 25%.
 11. In the majority idiopathic.
- ❖ Prolonged pregnancy is increased in first pregnancies, but is not related to maternal age and the median duration of pregnancy is 2 days longer in nullipara compared with multipara.
 - ❖ Women with a body mass index of greater than 30 are at increased risk of prolonged pregnancy
 - ❖ The effects of anencephaly and of placental sulphatase deficiency on the duration are interesting examples of extreme post-term pregnancy.

RISK ASSOCIATED WITH PROLOGED PREGNANCY

There are several increase risk include:

1. Perinatal mortality:

- Perinatal mortality rate increase more with prolonged pregnancy about 25% of mortality due to
- Congenital malformation

2. Perinatal morbidity: perinatal morbidity increase with prolonged pregnancy which include;

- Meconium aspiration syndrome
- Skull fracture
- Brachial plexus injuries
- Neonatal seizures
- Intracranial hemorrhage
- Neonatal sepsis
- Cerebral palsy

3. Other complications of labor:

- Dystocia, shoulder dystocia and obstetric trauma these risk increase with increase fetal weight but gestational age remains risk factor independent of birth weight

4. Increase caesarean section rates in post-term pregnancy.

ANTENATAL TESTS FOR FOLLOWING PROLONGED PREGNANCY

- The evidence of increased perinatal mortality and morbidity in prolonged pregnancy compared with full term delivery inevitably leads to the conclusion that some cases of prolonged pregnancy should be prevented by earlier delivery.
- It seems logical to use screening tests to identify pregnancies that are destined to have an adverse outcome and to intervene selectively in these pregnancies.
- At present no method of monitoring post-term pregnancy is backed up by strong evidence of effectiveness
- High risk pregnancy: which include pregnant lady with obstetric and medical problem as in general role should not pass her due.
- All decide to terminate her pregnancy before completed 40 wks.

These monitoring during antenatal include:

1. Ultrasound assessment of amniotic fluid.
2. Biophysical profile.
3. Cardiotocography.
4. Fetal movement counting.
5. Doppler velocimetry.

- Regarding US monitoring of amniotic fluid volume can classify as normal, reduced or absent amniotic fluid.
- Patients classified as having reduced or absent amniotic fluid had significant excess incidence of:
 1. Meconium stained liquor,
 2. Fetal acidosis ,
 3. Birth asphyxia and meconium aspiration
- So ultrasound finding of: maximum vertical pool of amniotic fluid of less than 2.7 cm was the best predictor of abnormal perinatal out come

Regarding biophysical profile

- Those women who had abnormal biophysical profiles had significantly higher rates of neonatal morbidity , caesarean section for fetal distress and meconium aspiration than the women with reassuring biophysical profiles

Cardiotocograph

- Regarding cardiotocograph
- Observation in post-term pregnancies show that computerized CTG may improve fetal surveillance and improve out come

Regarding fetal movement counting

Routine counting in full term pregnancy result in:

1. More frequent reports of diminished fetal activity ,
2. With greater use of other techniques of fetal assessment ,
3. More admission to hospital and
4. Increase rate of elective delivery.
- Women will required to pay extra attention to fetal movements for less than 1 week in the majority of cases and will usually be attending at intervals of 3 days for other tests

Regarding doppler velocimetry

- Studies of umbilical artery velocimetry in prolonged pregnancy have no benefit.
- But study of middle cerebral artery doppler to umbilical artery doppler ratio was the best predictor of adverse outcome like meconium aspiration syndrome or caesarean section for fetal distress or fetal acidosis

MANAGEMENT OF PROLONGED PREGNANCY

Immediate induction of labor or delivery post-date should take place if:

1. There is reduced amniotic fluid on scan.
2. Fetal growth is reduced.
3. Reduced fetal movements.
4. CTG is abnormal.
5. The mother suffer medical illness such as hypertension, diabetes mellitus

The royal college of obstetricians & gynecologists recommend an excellent guide to manage prolonged pregnancy include:

1. Every effort made to ensure that dates are as accurate as possible.
2. Women reach 41 week should consult obstetrician.
3. Women have a right to be informed of increase risk with continuing the pregnancy after 41 weeks
4. Following vaginal examination , induction of labor should be offered on a date after 41 weeks , the vaginal examination could be accompany by sweeping of the membranes , sweeping reduced the formal induction of labor
5. If the cervix is unfavorable using bishop's score, cervical ripening should be under taken.

Modified Bishop's Score for Cervical Assessment				
Score	0	1	2	3
Dilatation	0	1-2	3-4	>4
Effacement	0-30%	40-50%	60-70%	>80%
Station	-3	-2	-1/0	+1, +2, +3
Consistency	Firm	Medium	Soft	
Position	Posterior	Mid	Anterior	

- Total score of bishops score is **13**
- Bishop score **< 5** regarded unfavorable cervix
- Bishop score **> 5** regarded favorable cervix.

6. For women who have previously delivered vaginally and who have favorable cervix, induction of labor is unlikely to be difficult process.

7. If induction failed so caesarean section done.